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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Industrial Application] About skin external preparations, in more detail, this invention can prevent skin inflammations, desiccation, etc. and relates to the skin external preparations in which the effect outstanding to the dry skin which shows the cutaneous symptom according to drying skin disease and this is shown.

**[0002]**

[Description of the Prior Art] As medicinal properties used in order to prevent skin inflammations, desiccation, etc. conventionally, allantoin, an aloe extract, a placenta extract, a ginseng radix extract, hyaluronic acid, collagen, and amino acid are known. However, in the skin external preparations containing these drugs ingredients, sufficient effect could not be acquired but development of the skin external preparations which have the more outstanding operation was desired.

[0003] On the other hand, sesame oil contains highly alpha-linoleic acid which is a kind of a higher unsaturated fatty acid omega-3 system.

When it applies to skin, grace is given and the effect which protects with the umbrella of skin is known.

This alpha-linoleic acid is metabolized by eicosapentaenoic acid and docosahexaenoic acid in the inside of the body. It turns out that it is effective in decreasing these production of the leukotriene from which a higher unsaturated fatty acid starts the \*\* Gunn effect and an allergic reaction omega-3 system now, and attention is attracted.

**[0004]**

[Problem(s) to be Solved by the Invention] This invention persons tried to blend this with the skin external preparations which have improving actions, such as skin external preparations especially skin inflammations, and desiccation, paying attention to the above-mentioned

operation which sesame oil has. However, the actual condition was that the effect which sufficient thing cannot say for improving actions, such as inflammation of the skin at the time of blending sesame oil independently and desiccation, and this originally has under the influence of other bases must fully have been demonstrated.

[0005]There was a limit also in the operation effect at the time of blending sesame oil at high concentration in order to acquire a higher effect, and there was also a problem of also producing the restriction in product faces, such as loadings and a pharmaceutical form, conversely by the characteristic color which these compounds itself have, or stinking thing generating.

[0006]

[Means for Solving the Problem]In view of said actual condition, this invention persons inquired wholeheartedly so that they may fully pull out an operation which sesame oil has. As a result, by combining these and a specific compound, it finds out that improving actions, such as inflammation of the outstanding skin and desiccation, are demonstrated stably and synergistically, and came [ and ] to complete this invention.

[0007]This invention Namely, the (a) ingredient and (b) ingredient (a) sesame oil (b) glycyrrhizic acid, Skin external preparations containing one sort chosen from glycyrrhetic acid, phospholipid, hydrogenation phospholipid, cholesterol, its derivative and those salts, perilla exttact, dokudami extract, a creeping saxifrage extract, maltitol, sorbitol, and mannitol or two sorts or more are provided.

[0008]With sesame oil which is the (a) ingredient used indispensable in this invention. It is extracted from a seed of sesame *Perilla frutescens* Britton var.*japonica* Hara and other species of the same genus (Lamiaceae) by a method usually used, and a method in particular is not limited. A thing which condensed further alpha-linoleic acid which is the main ingredients, and raised a content, or an oil and fat composition which prepared an ingredient besides these is also contained.

[0009]Even if it blends sesame oil with skin external preparations of this invention as it is, it may use a thing refined by steam distillation, activated carbon treatment, acid earth processing, etc.

[0010]Content of sesame oil in cosmetics of this invention is 0.0001 to 10 % of the weight ("%" only shows below), and is 0.01 to 5% more preferably. If content is less than 0.0001%, even if it may not be obtained in sufficient effect and blends exceeding 10%, increase of an effect beyond it is not seen but a problem in a product face may produce it -- depending on coloring, stinking thing generating, and a pharmaceutical form, precipitate arises on the contrary.

[0011]On the other hand in this invention, the (b) ingredient which are other essential ingredients, It is one sort chosen from glycyrrhizic acid, glycyrrhetic acid, phospholipid, hydrogenation phospholipid, cholesterol, its derivative and those salts, perilla exttact,

dokudami extract, a creeping saxifrage extract, maltitol, sorbitol, and mannitol, or two sorts or more.

[0012]These (b) ingredients are ingredients conventionally blended with skin external preparations, and in particular the origin or acquisition method are not limited, and can use what is generally marketed.

[0013]It is 0.00001 to 10% of the content (it is related with an extract and is as dry \*\*\*\*\*) in skin external preparations of this invention of the above-mentioned specific component, and is 0.001 to 3% more preferably. When there is less content of these specific components than 0.00001%, even if sufficient effect may not be acquired and it blends exceeding 10%, increase of an effect beyond it is not seen but an adverse effect in respect of pharmaceutical preparation may produce it on the contrary.

[0014]In the range which does not spoil an effect of this invention to skin external preparations of this invention. An aqueous ingredient and a granular material which are used for the usual skin external preparations other than said essential ingredient, a surface-active agent, oils, a moisturizer, alcohols, a pH adjuster, an antiseptic, coloring matter, an antioxidant, an ultraviolet ray absorbent, a thickener, perfume, a cosmetics ingredient, etc. can be blended suitably if needed.

[0015]The skin external preparations of this invention can blend the (a) ingredient and the (b) ingredient, and can manufacture them in accordance with a conventional method. It can be considered as drugs, such as dispersion liquid, an ointment, cream pharmaceuticals, liquids for external use, etc. besides cosmetics, such as a milky lotion, cream, face toilet, an essence, cleansing cream, a pack, a charge of washing, and foundation, quasi drugs, etc.

[0016]

[Example] Next, although an example is given and this invention is explained further, this invention is not limited to these.

[0017]Example 1: The milky lotion was manufactured by the formula and process which are shown below in a milky lotion. About each obtained milky lotion, evaluation by the Calah Genn footpad-edema inhibition test was performed.

[0018]( Formula)

[Table 1]

表 1

成分(重量%)	本発明品				比較品				
	1	2	3	4	1	2	3	4	5
(1)スクワレン	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
(2)ワセリン	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
(3)ミツロウ	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
(4)ソルビタンセスキオレイン酸エチル	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
(5)ポリキシエチレンオレイルエーテル(20E.O.)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
(6)1,3-ブチレングリコール	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
(7)ココマ油(注1)	1.0	1.0	1.0	1.0	1.0	—	—	—	—
(8)ケラチリシン酸ジカルボン(注2)	0.2	—	—	—	—	0.2	—	—	—
(9)シナ抽出物(注3)	—	0.2	—	—	—	—	0.2	—	—
(10)ドクダミ抽出物(注4)	—	—	1.0	—	—	—	—	1.0	—
(11)ヨキナシ抽出物(注5)	—	—	—	1.0	—	—	—	—	1.0
(12)エチルアルコール	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
(13)防腐剤	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
(14)香料	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
(15)サンタガム(2%水溶液)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
(16)精製水	残量								

(注1) ツバキ科の種子から得た油脂

(注2) 丸善製薬社製

(注3) ツバキ科の葉10部に50V/V%エタノール100部を加え、室温で時々攪拌しながら3日間抽出して得たエキスを凍結乾燥したもの

(注4) ドクダミ(ドクダミ科)の地上部10部に50V/V%1,3-ブチレングリコール100部を加え、室温で7日間抽出して得たエキス

(注5) ヨキナシ(ヨキナシ科)の葉10部に1,3-ブチレングリコール100部を加え、室温で時々攪拌しながら3日間抽出して得たエキス

## [0019]( Process)

A. Carry out heating mixing of an ingredient (6), (8) - (12), and (16), and keep at 70 \*\*.

B. Ingredient (1) Heating mixing of - (5), (7) and (13), and (14) is carried out, and it keeps at 70 \*\*.

C. The above-mentioned B is added to previous A, and it mixes, and (15) is added, emulsify uniformly, cool to 30 \*\*, and obtain a milky lotion.

## [0020]( Evaluation)

Carrageenin footpad-edema inhibition test : The Wistar system male rat of six to 7 weeks old is made into one groups [ ten ], It applies 0.1 ml of each sample at a time immediately after 2 hours of carrageenin injection which carries out subcutaneous injection of the carrageenin physiological saline solution to a rat hind-foot planta 1% as a prophlogistic agent, and produces an edema, and injection, the planta capacity 4 hours after carrageenin injection is measured, and it asks for the edema control rate to a control group.

[0021]A carrageenin footpad-edema inhibition test result is shown in Table 2.

[0022]

[Table 2]

表2

試験結果		カラゲニン浮腫 抑制率 (%)
本発明品	1	45.8
	2	37.0
	3	39.7
	4	33.6
比較品	1	10.2
	2	21.5
	3	8.3
	4	5.0
	5	5.1

[0023]As compared with 1-5 of the comparison article which blended each independently, as for 1-4 of this invention article which used together sesame oil, dipotassium glycyrrhizinate and perilla exttact, and a creeping saxifrage extract, it turns out that remarkable edema depressant action is shown and there is the outstanding resolution effect so that clearly from the result of Table 2.

[0024]Example 2: The milky lotion was manufactured by the formula and process which are shown below in a milky lotion. About each obtained milky lotion, evaluation by surface deterioration improvement examination was performed.

[0025]( Formula)

[Table 3]

表 3

成分(重量%)	本発明品		比較品			
	5	6	6	7	8	9
(1) カラメル	5.0	5.0	5.0	5.0	5.0	5.0
(2) ワセリン	2.0	2.0	2.0	2.0	2.0	2.0
(3) ミツロウ	0.5	0.5	0.5	0.5	0.5	0.5
(4) ソルビタンセスキオレイン酸エチル	0.8	0.8	0.8	0.8	0.8	0.8
(5) ポリオキシエチレンオレイルエーテル(20E.O.)	1.2	1.2	1.2	1.2	1.2	1.2
(6) 1,3-ブチレングリコール	5.0	5.0	5.0	5.0	5.0	5.0
(7) エゴマ油(注1)	0.2	0.2	0.2	—	—	—
(8) マルチトル(注2)	0.1	—	—	0.1	—	—
(9) 水添大豆ソルビタートリグリセリド(注3)	—	0.5	—	—	0.5	—
(10) エチルアルコール	5.0	5.0	5.0	5.0	5.0	5.0
(11) 防腐剤	0.2	0.2	0.2	0.2	0.2	0.2
(12) 香料	0.1	0.1	0.1	0.1	0.1	0.1
(13) キサンタンガム(2%水溶液)	20.0	20.0	20.0	20.0	20.0	20.0
(14) 精製水	残量	残量	残量	残量	残量	残量

(注1)ソラ科エゴマの種子から得た油脂

(注2)林原商事製

(注3)日光ガム社製

## [0026]( Process)

A. Carry out heating mixing of an ingredient (6), (8) - (10), and (14), and keep at 70 \*\*.

B. Ingredient (1) Heating mixing of - (5), (7) and (11), and (12) is carried out, and it keeps at 70 \*\*.

C. The above-mentioned B is added to previous A, and it mixes, and (13) is added, emulsify uniformly, cool to 30 \*\*, and obtain a milky lotion.

## [0027]( Evaluation)

Surface-deterioration improvement examination: Ten 24 to 40-year-old healthy persons were used as the panel, the skin state before causing experimental chapped skin was photoed with the microscope camera, and it asked for the score by the following standard. Experimental chapped skin was caused by processing an upper arm flexor by ether and acetone (1:1) mixture. Furthermore, the 2 times tested emulsion of a morning and night was applied over seven days every day after that, and it asked for the score of the skin state like the above 3, 5, and seven days after chapped skin inducement.

## [0028]( Standard)

Score 1 A leather slot is indistinct and many exfoliations of keratin are accepted.

2 A leather slot is slightly indistinct and exfoliation of keratin is accepted.

3 Although a leather slot is accepted, it is shallow or, on the other hand, its tropism is strong.

4 A leather slot is accepted and it is mesh shape a little.

5 The leather slot which was ready in mesh shape is accepted.

[0029]A surface deterioration improvement test result is shown in Table 4.

## [0030]

## [Table 4]

表 4

試験結果	肌荒れ改善スコア				
	惹起前	3日後	5日後	7日後	
本発明品	5 6	3.4 3.0	1.5 1.3	2.6 2.4	3.9 4.0
	6 7 8 9	3.3 3.4 3.3 3.4	1.3 1.3 1.3 1.3	2.3 2.0 2.3 1.9	2.9 2.5 2.9 2.2
比較品	6	3.3	1.3	2.3	2.9
	7	3.4	1.3	2.0	2.5
	8	3.3	1.3	2.3	2.9
	9	3.4	1.3	1.9	2.2

[0031]this invention article 5 and 6 which used together sesame oil, maltitol, and hydrogenation soybean phosphatide shows a remarkable surface deterioration improvement effect operation as compared with the comparison article 9 which does not contain the comparison article 6-8 and these which blended each independently, and it turns out that there

is an outstanding effect so that clearly from the result of Table 4.

[0032]Example 3: The milky lotion was manufactured by the formula and process which are shown below in a milky lotion. The beautiful skin effect was evaluated about the obtained milky lotion.

[0033]( Formula)

This invention article 1 (as being shown in Example 1)

This invention article 6 (as being shown in Example 2)

Comparison article 1 (as being shown in Example 1)

Comparison article 2 (as being shown in Example 1)

Comparison article 3 (as being shown in Example 1)

[0034](Process) As having been shown in Example 1 or Example 2, respectively.

[0035]( Evaluation)

Beautiful-skin-effect examination: 15 women aged from 25 to 56 accepted that the skin of the face is dry skin were used as the panel, and over 2 times, a morning and night, and eight weeks, it pointed every day so that optimum dose of tested emulsions might be applied to the face after washing their face. The effect by spreading was evaluated in accordance with the lower standard.

[0036]( Standard)

Evaluation Desiccation of the skin has been improved remarkably and the grace of skin and gloss came out.

Higher efficacy Desiccation of the skin is improved and the grace of skin came to be sensed.

Slightly effective Desiccation of the skin stopped being conspicuous.

Invalid It is not different from before use.

[0037]A beautiful skin effect test result is shown in Table 5.

[0038]

[Table 5]

表 5

試験結果	評 価			
	著効	有効	やや有効	無効
本発明品	1	4	11	0
	6	5	9	1
比較例	1	0	5	8
	2	0	2	6
	3	0	2	5

[0039]this invention article 1 and 2 which used together sesame oil, dipotassium glycyrrhizinate, and hydrogenation soybean phosphatide shows the improvement effect of remarkable dry skin as compared with the comparison article 1-3 which blended each independently, and it turns out that there is an outstanding effect so that clearly from the result

of Table 5.

[0040]Example 4: Face toilet was obtained by face toilet next the shown formula, and the following process. The face toilet of this invention has the improvement effect outstanding to skin inflammations, desiccation, etc.

[0041]

(Formula) (% of the weight)

(1) glycerin 5.0(2)1,3-butylene-glycol 6.5(3) polyoxyethylene sorbitan 1.2 mono- laurate ester (20E.O.)

(4) Ethyl alcohol 8.0(5) sesame-oil 0.01(6) beefsteak-plant extract (notes) 3.0 (7) antiseptic 0.2

(8) perfume 0.1 (9) purified water Made in residue (notes) Nikko Chemicals[0042]( Process)

A. The mixture solution of (3) - (5), (7), and (8) is carried out.

B. The mixture solution of (1) - (2), (6), and (9) is carried out.

C. Mix the above A and B, make it uniform, and obtain face toilet.

[0043]Example 5: The pack was obtained by the pack next the shown formula, and the following process. The pack of this invention has the improvement effect outstanding to skin inflammations, desiccation, etc.

[0044]

(Formula) (% of the weight)

(1) Polyvinyl alcohol 20.0 glycerin [ (2) ] 5.0(3) kaolin 6.0(4) sorbitol (notes) 0.01 (5) ethyl-alcohol 20.0 (6) sesame-oil 0.05 (7) antiseptic 0.2 (8) perfume 0.1 (9) purified water Residue (notes) Wako Pure Chem make[0045]( Process)

A. Ingredient (1) - (4) and (9) are mixed, and it heats and stirs at 70 \*\*.

B. Ingredient (5) - (8) is mixed.

C. Cool and obtain a pack, after adding the above-mentioned B to previous A and mixing.

[0046]Example 6: The charge of washing was obtained by the charge of washing next the shown formula, and the following process. The charge of washing of this invention has the improvement effect outstanding to skin inflammations, desiccation, etc.

[0047]

(Formula) (% of the weight)

(1) Stearic acid 10.0 (2) pulmitic-acid . 8.0 (3) myristic-acid 12.0 (4) lauric-acid . 4.0 (5) oleyl-alcohol 1.5 (6) purified-lanolin . 1.0 (7) perfume 0.1 (8) antiseptic 0.2 (9) glycerin -- 18.0 (10) potassium-hydrate 6.0 (11) sesame-oil 0.5 (12) stearyl glycyrrhetic acid (notes) 0.05 (13) purified water Residue (notes) Maruzen Pharmaceuticals Co., Ltd. make[0048]( Process)

A. Ingredient (9) - (10) and (13) are mixed and it heats at 70 \*\*.

B. Ingredient (1) - (6), (8), (11), and (12) are mixed, and it heats at 70 \*\*.

C. The above-mentioned B is added to previous A, and it keeps at 70 \*\* for a while, and cool to 50 \*\* after completing a saponification reaction, add (7), cool, and obtain the charge of

washing.

[0049]

[Effect of the Invention] The skin external preparations of this invention can prevent skin inflammations, desiccation, etc., and the improvement effect outstanding to what is called dry skin that shows the condition according to a drying disease and this is shown.

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